DOCUMENT RESUME

ED 131 199 CE 007 710

AUTHOR Lee, Jasper S., Comp.
TITLE A Reference Unit on Understanding the Role of Research and Education in Agriculture. Agriculture and Natural Resources Series. Publication 1016.
INSTITUTION Mississippi Research and Curriculum Unit for Vocational and Technical Education, State College.
SPONS AGENCY Mississippi State Dept. of Education, Jackson. Div. of Vocational and Technical Education.
PUB DATE 74
NOTE 35p.

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS *Agricultural Education; *Agricultural Research Projects; *Agriculture; Farmers; *Federal Legislation; Government Role; Instructional Materials; Organizations (Groups); Periodicals; *Research; Secondary Education; State Legislation; Units of Study (Subject Fields)

ABSTRACT

On the premise that all persons with agricultural careers will be better able to function if they have at least an elementary knowledge of how agricultural research and education and farmer organizations came into being and what their roles are in modern agriculture, this unit is designed to aid in understanding the nature and importance of agricultural research and education. Each of the following questions is discussed in a short chapter: (1) What has been the role of volunteer agricultural societies? (2) What has been the role of Federal legislation? (3) What has been the role of state legislation? (4) What has been the role of farmer organizations? and (5) What has been the role of private industry? The appendix contains a listing of 92 regional and national agricultural magazines and a list of 16 sources of additional information. (WL)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED131199

A Reference Unit on Understanding the Role of Research and Education in Agriculture

Compiled by

Jasper S. Lee

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Published by

Division of Vocational and Technical Education
State Department of Education
Jackson, Mississippi

&

Research and Curriculum Unit for Vocational Technical Education
Mississippi State University
College of Education
Mississippi State, Mississippi

Agriculture and Natural Resources Series
Publication 1016

1974

CE 007 710

Direct inquiries to:

Research and Curriculum Unit
Drawer DX
Mississippi State, Mississippi 39762

Mississippi State University does not discriminate on the grounds of race, color, religion, sex, or national origin.

TABLE OF CONTENTS

Preface II

Acknowledgments III

Introduction 1

What has been the role of **volunteer agricultural societies?** 2

What has been the role of **Federal legislation?** 4

What has been the role of **State legislation?** 10

What has been the role of **farmer organizations?** 11

What has been the role of **private industry?** 15

Appendix 18

Bibliography 27

PREFACE

Many persons tend to take for granted the role of agricultural research, education, and farmer organizations in the United States. These did not suddenly appear but came about over a period of many years. The roots of educational and research efforts in agriculture are parallel with the growth and industrial development of the country. All persons with agricultural careers will be better able to function if they have at least an elementary knowledge of how these came into being and their roles in modern agriculture.

The areas of agricultural research, education, and regulation employ many persons with agricultural training. The preparation of workers for these occupations is a definite responsibility of agricultural education. This publication should assist youth in understanding the importance and role of this aspect of agriculture. Perhaps it will inspire youth to pursue occupations in one of these areas.

It is appropriate to mention at this point that the responsibilities and functions of the government agencies involved with agriculture are constantly changing. This change can be attributed to legislation which creates new areas or discontinues old areas of activity. This change also can be attributed to changes in the agricultural sector of the American and World economy. Crop failures, surpluses, and new cultural developments create new areas of concern. It is impossible for a publication such as this to stay up-to-date without revision and supplementation of new materials.

Jasper S. Lee, Associate Professor
Virginia Polytechnic Institute and
State University

ACKNOWLEDGMENTS

Several people provided assistance which was useful in the preparation of this publication. Special recognition is given the following persons:

Mr. Paul Cheek, MFC Services, for reviewing the manuscript and other assistance.

Mr. H. L. Huff, Agriculture Instructor, Alcorn County (Mississippi) Vocational Complex, for reviewing the outline and manuscript.

Mr. Bobby Gene Walley, Agriculture Instructor, Leakesville (Mississippi) High School, for reviewing the outline and manuscript.

Dr. O. L. Snowden, former Head, Agricultural Education Department, Mississippi State University, for reviewing the outline and providing general assistance.

Mr. E. N. Elliott, Teacher Trainer, Alcorn State University, for reviewing the outline and manuscript.

Dr. Thomas Foster, Assistant Professor, Agricultural Economics Department, Mississippi State University, for reviewing the manuscript and consulting with the author.

INTRODUCTION

Our early farmers met and overcame many obstacles. New land had to be cleared of great forests. Soil which had never before been plowed had to be cultivated. Settlers had to adjust to strange and unfamiliar climates and pests. Scientific knowledge about agriculture was lacking, and if it had existed, there would have been little way of spreading it to the farmers. All of these problems indicated a need for studying agricultural practices, determining which were best, and relating this information to the farmers themselves. Education and research have filled this need and have made important contributions to the development of agriculture. This unit is designed to aid in understanding the nature and importance of agricultural research and education. The following questions will be discussed:

1. What has been the role of volunteer agricultural societies?
2. What has been the role of Federal legislation?
3. What has been the role of State legislation?
4. What has been the role of farmer organizations?
5. What has been the role of private industry?

1. What has been the role of volunteer agricultural societies?

Volunteer agricultural societies were formed as a result of the first efforts in agricultural research and education. The Philadelphia Society for the Promotion of Agriculture was organized on March 1, 1785, and included such honorary members as George Washington and Benjamin Franklin. In the same year a similar society was formed in South Carolina, and an early proposal developed by this society called for the establishment of experimental farms.

The first agricultural society formed in Mississippi was the Agricultural, Horticultural, and Botanical Society of Jefferson College (1839). The leading farmers around Natchez soon became members. Activities of this society included visiting different farms in the area to observe how farming practices were carried out.

By 1852 the number of agricultural societies in the United States had grown to include 300 active local and county organizations. Thirty-one states and three territories could claim one or more societies, and interest in the agricultural society movement was very high. In 1860 there were 941 societies, and in that same year the United States Agricultural Society was formed. The U. S. Society soon held numerous exhibitions and published a journal.

Since they were often composed of the wealthiest and most successful farmers, it was natural that these societies could become very strong. One of the first activities they promoted was the establishment of a division in the Federal Government to look after the needs of agriculture. This culminated in the formation of the U. S. Department of Agriculture. But the society movement lost momentum as other farm organizations developed and Federal legislation created new agricultural programs.

Figure 1. Modern American Agriculture has been greatly influenced by research and education programs. (Research into nutrition, cattle improvement, and facility construction are a few areas applicable to beef cattle production.) (Courtesy Agri-Products Division, Butler Manufacturing Company, Kansas City, Missouri)

2. What has been the role of Federal legislation?

The early agricultural societies stimulated interest in agricultural education and research. One of the societies' primary interests was to gain favorable government programs, so Federal legislation became very important. One of the first and perhaps most significant of this legislation was the establishment of what is known today as the U. S. Department of Agriculture. Other important laws that were enacted related to land grant colleges, agricultural experiment stations, extension programs, and public school instruction in agriculture.

U. S. Department of Agriculture

President Abraham Lincoln on May 15, 1862, signed the law which authorized the setting up of an agricultural department, and Isaac Newton became the first commissioner of agriculture. This was not an independent department, however. It was in 1889 that President Grover Cleveland signed into law the act of Congress which established the USDA with cabinet status. Today the Department is headed by a Secretary of Agriculture, and numerous activities are conducted on a national level. Some of the most important areas of activity are listed below.

Research - The USDA conducts, coordinates, and administers Federal funds for agricultural research. The divisions of the Department working in research include the Agricultural Research Service, the Cooperative State Research Service, the Farmer Cooperative Service, and the Forest Service.

Education - The primary educational effort of the USDA is through the Cooperative Extension Service, which will be discussed later. The National Agricultural Library located at Beltsville, Maryland, is maintained by the Department. It is said to be the most extensive agricultural library in existence.

Information - Bulletins, films, radio and television material, and other information are prepared and distributed by the USDA. The Office of Information is the coordinator of this service.

Marketing and Consumer Services - This area of USDA activity is very broad, including the establishment of standards for grades, animal and plant health inspection, meat and poultry products inspection, and assistance in the orderly and fair marketing of agricultural commodities. Some of the agencies involved here include the Commodity Exchange Authority, the Agricultural Marketing Service, the Food and Nutrition Service, the Animal and Plant Health Inspection Service, and the Packers and Stockyards Administration.

Foreign Trade and Aid - This area of activity involves studying and promoting the foreign markets for agricultural commodities. These activities are administered by the Foreign Agricultural Service and the Export Marketing Service.

Figure 2. Cotton production has been closely identified with Federal Government Programs.

Economics - The USDA reports on crop and livestock production and prices, outlook information, consumer preferences, and other areas. The Economic Research Service and the Statistical Reporting Service are responsible in these areas.

Soil, Water, and Forest Conservation - This area involves the protection and utilization of various natural resources, such as soil, water, and forests. The Soil Conservation Service and the Forest Service are the agencies most involved in these activities.

Stabilization - The maintenance of adequate supplies of food and fiber, without excessive surpluses, is the chief stabilization activity of the USDA. The Agricultural Stabilization and Conservation Service is primarily responsible, but the Federal Crop Insurance Corporation is also included here. It provides farmers with crop insurance in case of loss due to bad weather, insects, disease, or other unavoidable natural causes.

Rural Development - Several services of the USDA are involved in conducting programs designed to aid the development of rural areas. These are coordinated with state and local programs.

Credit - The USDA, through the Farmers' Home Administration, provides loans and grants to farmers and rural communities. In recent years, many communities have established water systems, waste disposal systems, fire-fighting facilities, and other community services as a result of USDA assistance.

Emergency programs - The USDA actively participates in emergency programs, such as following floods, drought, or other natural disasters. It also has a role in the national defense program.

Agricultural Colleges.

The Morrill Act in 1862 provided for the establishment of colleges to teach agricultural and mechanical arts as well as military science. Thirty thousand acres of land were set aside for each senator and representative from each state. In Mississippi two colleges are currently operating as land grant colleges Mississippi State University, established in 1878 as Mississippi A & M College, and Alcorn State University, established in 1830 as Oakland College and later Alcorn A & M College. Both universities currently operate prominent programs of instruction in agriculture, and for young people interested in agricultural careers, they offer programs of instruction which may lead to employment in a wide variety of agribusiness occupations.

Agricultural Research.

Efforts in agricultural research received a big boost by the passage of the Hatch Act in 1887. This act provided for a system of agricultural experiment stations to be

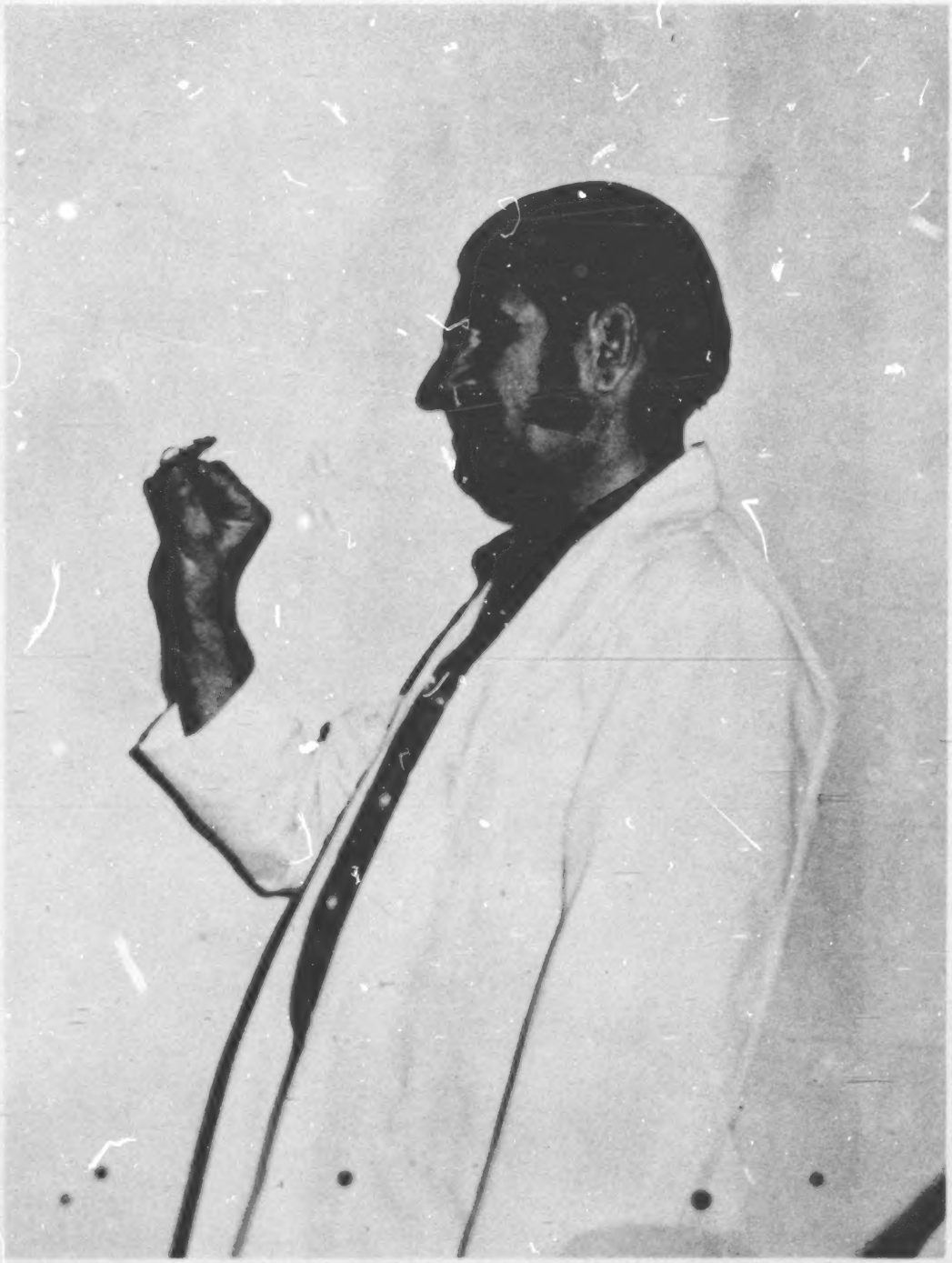


Figure 3. A research entomologist examining an insect specimen at an agricultural experiment station.

established in connection with the land grant colleges. Under this act badly needed research to produce the necessary scientific knowledge for an increasingly productive agriculture could be conducted. These stations have contributed many improvements to agriculture since their establishment, and they still are involved in conducting important research aimed at numerous problems in agriculture. In Mississippi branches of the agricultural experiment station are found throughout the State.

Agricultural Education.

Two major Federal acts contributed to improved agricultural education in the early 1900's. These were the Smith-Lever Act (1914) and the Smith-Hughes Act (1917). The Smith-Lever Act provided that each land grant college should create a separate extension division for conducting instruction and demonstrations in agricultural and home economics subjects. Today this division is known as the Cooperative Extension Service, and offices are found in every county. Local staff usually includes a county agricultural agent and one or more assistants. The state-level office for the Mississippi Cooperative Extension Service is located at Mississippi State University.

The Smith-Hughes Act provided for the establishment of programs of instruction in agriculture, home economics, and trade and industrial education in the public schools. Both in-school youth and out-of-school adults were to receive instruction, and funds were provided for the reimbursement of salaries of teachers, supervisors, and directors of such programs. Since 1917 several additional acts have been passed, the most notable of which is probably the 1963 Act, which expanded the instruction to all areas of agriculture, including agribusiness. There are approximately 220 high schools in Mississippi with agricultural instruction programs. Several junior colleges also have programs, which are usually more highly specialized than those at the high school level. On the State level this instruction is administered by the State Superintendent of Education, the Director of Vocational Education, and the State Supervisor of Agricultural Education.

Figure 4. FFA activities are an integral part of the high school agricultural education program. (The above photograph shows an FFA member exhibiting a beef animal.) (Courtesy Agricultural Education Program, Virginia Polytechnic Institute and State University, Blacksburg, Virginia)

3. What has been the role of State legislation?

Almost all Federal educational and research activities in Mississippi require some State matching funds. The Mississippi Legislature annually makes an appropriation of monies to be used along with the Federal monies. The amount of matching money which the State appropriates varies, but in some cases it may be more than 50% of the total spent. Some funding for these activities may be obtained on the local level, as in the case of an agricultural teacher. State legislation also supports a department on the State level concerned with agriculture.

Department of Agriculture and Commerce.

The primary agency operated by the State and concerned with agricultural matters is the Mississippi Department of Agriculture and Commerce (MDAC). This department was formed in 1906 to foster and promote agriculture, and in 1919 an agreement was made whereby it would limit its activities to regulatory and related duties as authorized by the State Legislature. Therefore, the department is not directly involved in extension, teaching, or experimental work.

The chief officer is known as the "Commissioner" and is elected every four years. The Commissioner not only directs work of the MDAC, but also serves on numerous boards and commissions. Headquarters are located in the Walter Sillers State Office Building in Jackson, and various divisions and offices are located elsewhere in the State. An annual report is published each fiscal year and gives details on duties and activities. Since the MDAC is closely involved with agribusiness, some of its duties and responsibilities are briefly discussed here.

Agricultural Statistics - Statistical data about crop and livestock numbers are compiled by the Mississippi Crop and Livestock Reporting Service. This is a joint service provided by the MDAC and the Statistical Reporting Service of the U. S. Department of Agriculture.

Regulatory Activities - The MDAC has a number of responsibilities in checking and regulating the sale of seed, feed, fertilizer, pesticides, grain, meat, poultry, eggs, and dairy products. Different divisions within the department are responsible for one or more of these areas. Enforcement of the Weights and Measures Law enacted in 1964 is another duty. In 1965 the Legislature also designated the MDAC responsible for licensing and inspecting rendering plants.

Market Promotion - The promotion of agricultural products and the image of agriculture is a function of MDAC. Various kinds of promotional activities are conducted by the Division of Market Promotion and Consumer Relations. The **Mississippi Market Bulletin** is published twice monthly and serves as a means of marketing a wide range of agricultural products. More than 100,000 persons subscribe to the bulletin, which is available free of charge to residents of the State.

Other Activities - The MDAC is involved in numerous other activities. Some of these include: supervising the State Veterinarian and Diagnostic Laboratory, operating two lime plants, assisting in the operation of the Farmers' Market, conducting various disease and pest eradication programs, conducting consumer protection activities, and promoting the proper utilization of land.

4. What has been the role of farmer organizations?

Several voluntary farmer organizations have been active in improving agricultural conditions and stimulating education and research. These represent groups of agriculturalists, primarily farmers, who have joined together to provide for needs not met by other agencies. Some serve the general needs of agriculture, while others serve specific areas of agriculture, such as cotton, beef cattle, catfish, and dairy products. Foremost among the general organizations are the Farm Bureau, the Grange, and the Farmers' Union.

Farm Bureau.

The farm bureau movement began in 1911 in New York State when the Binghamton (New York) Chamber of Commerce, the Delaware and Lackawanna Railroad, and an Office of the Bureau of Plant Industry joined together to assist in obtaining a county agent. Mr. John H. Barron was hired to work as a county agent in Broom and also in adjacent counties of New York. After this, farm bureaus sprang up quickly throughout the nation to assist, among other activities, in initiating the local county agent. The farm bureau was made a prerequisite for obtaining county agents in many states, and today it is the largest farmers' organization, with well over one million members.

Local farm bureaus were united together in 1919, when the American Farm Bureau Federation was formed. Three levels of Farm Bureau activity exist today - national, state, and local. On the national level much energy is given to obtaining legislation which is favorable to agriculture, and especially to the farmer. The Farm Bureau is operated on democratic principles, a national convention is held each year in which the representatives of state farm bureaus debate and vote on vital issues. A magazine, **The American Farmer**, is published on the national level and distributed to all members.

The State Farm Bureau in Mississippi, with its headquarters in Jackson, is organized similarly to the national organization. A State convention is held each year in which county Farm Bureau delegates may debate and vote on programs or policies affecting agriculture. Resolutions passed by the State convention are forwarded to the national office, members of Congress, and to other appropriate places. Young adult conferences are frequently held in which an attempt is made to educate the younger members for future leadership in the Farm Bureau. The State is divided into districts supervised by fieldmen and specialists in various phases of agriculture. These specialists may offer technical assistance to farmers in the production, harvesting, and marketing of their products, as well as in other areas.

On the local level the county farm bureaus try to assist in the development of the most profitable and permanent systems of agriculture. Activities include contests for young people, such as "Talk Meets," talent competitions, dress reviews for the ladies, and other events. Winners on each level may advance to district, state, and national competition. Annual harvest banquets, picnics, and other social activities are always tinted with an underlying educational theme. The county level, as well as state and

national levels, are under the supervision of a board of directors and elected officers. The Farm Bureau is also active in providing insurance, agricultural supplies, equipment, and other cooperative services to its members.

Almost all of the functions of the Farm Bureau have educational overtones; however, its chief activities are in securing legislative concessions and providing needed agricultural goods and services.

The Grange.

The Grange (National Grange of the Order of Patrons of Husbandry) is the oldest of the general farmers' organizations, having been formed as a secret society near Washington, D. C., on December 4, 1867. Four basic units of the Grange are organized, beginning with the subordinate, or local Grange, and progressing to the Pomona, or county Grange, the State Grange, and the National Grange. There is also a Juvenile Grange for the younger members of Grange families.

Educational activities of the Grange include the publication of bulletins, leaflets, and organizational papers; the conduction of conferences, workshops, and institutes; and the presentation of programs of entertainment, inspiration, and recreation. Lectors in the Subordinate Granges are responsible for planning and staging programs.

Efforts are also made by the Grange to influence state and national legislation. Members attending meetings of the National and State Granges exchange and debate ideas and sometimes formulate resolutions or statements for use by all units of the organization in lobbying for legislation. The program is one which is considered good for its members or for the community in which it is located.

Current membership in the Grange in the United States is slightly less than one million, 40 percent of which are women, boys, and girls. In Mississippi, Grange membership reached a peak of 30,000 in 1875 and began to decline shortly afterward. The decline was fairly rapid, so that today the Grange is primarily a thing of the past.

The Farmers' Union.

The Farmers' Educational and Cooperative Union (Farmers' Union) was formed by low income farmers in Texas (1902) for cooperative buying and selling of agricultural products. It appeared in Mississippi in 1903 and achieved a major legislative victory in 1906 with the establishment of the Mississippi Department of Agriculture and Commerce. But it had ceased operation in Mississippi by 1920. On a national level peak membership of two million was reached during the 1920's. Today, however, the membership has declined to less than 200,000 families.

Various levels of the Farmers' Union are held responsible for certain activities. On the local level regular meetings are held for educational, recreational, and entertainment purposes. The county level may sponsor cooperative business enterprises and county-wide improvement projects. The state and national divisions

sponsor conferences, workshops, and camps; publish bulletins, newsletters, and magazines; and pay fieldmen and women to sponsor and appear on programs. Libraries and loan services may also be maintained.

20

Figure 5. General view of annual meeting of the American Farm Bureau (Courtesy American Farm Bureau Federation, Park Ridge, Illinois)

5. What has been the role of private industry?

The role of private industry in agricultural research and education is often overlooked. This is unfortunate because many significant agricultural inventions have been the result of private research. Cyrus McCormick is responsible for the mechanical reaper (developed in 1834), which has undergone many improvements and is known today as a combine. John Deere is largely responsible for the steel plow share (developed in 1837), which was especially suited to heavy soils. William Ketchem developed the labor-saving mowing machine in 1844. Many other persons often associated with private industry could also be cited for their research and development in agricultural machinery alone. Their original efforts often grew into other areas and in some cases led to the growth of large industrial corporations manufacturing a wide range of agricultural equipment.

Improved varieties of crops are often developed by private business. The Delta and Pine Land Company of Scott, Mississippi, conducts a sizeable program in crop development and breeding. Varieties of crops, especially cotton, developed by D&PL are planted all over the world. Numerous seed companies are also actively in research and educational efforts in seed improvement. These companies often establish demonstration plots as part of an educational effort to inform the public about using improved varieties.

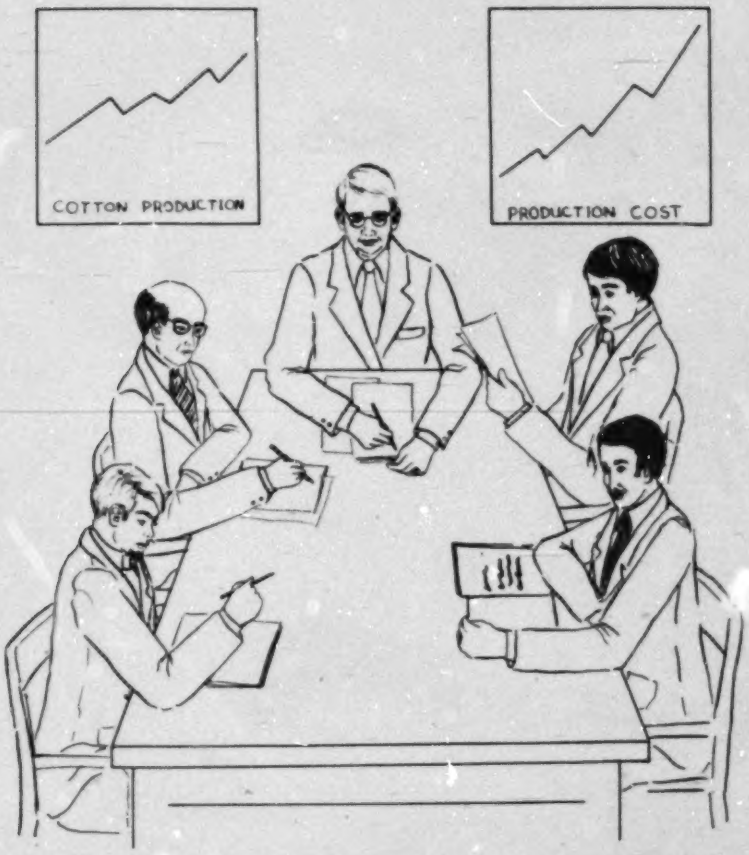
Many of the chemicals used in insect and weed control have been developed by industry. The research programs of the larger industries often have sizeable financial support. Of course, the goal of much of the research is to develop new products which can be marketed and may become profit-making ventures. Several examples of industries which conduct agricultural research in chemicals are Amchem Products, Inc., Baychem Corporation, W. R. Grace, Monsanto, Chevron, and Shell.

The role of industry in education is often more obvious to the public than its role in research. However, practically all companies with research programs also have educational activities. The educational programs of industry often involve two thrusts: (1) the education of workers employed by a company so that they will become better employees, and (2) educational activities for the general public or for users of certain products. The John Deere Company is a good example of a private industry with educational programs in both areas. First the company conducts training schools for mechanics and other personnel in the local dealerships. This is to ensure that there are adequate workers with the needed skills in equipment operation and repair. Secondly, Deere and Company has developed a series of educational materials on the operation and service of farm machinery. These materials are often used in high school agricultural education classes and by workers in agricultural mechanics occupations.

Many agricultural industries publish journals and magazines of general and specialized interests which may be available free or through subscription. The publications by industry often serve several purposes. First is the educational purpose of reporting the results of research and new technical developments. Secondly, there are several general agricultural magazines supported through advertising fees and

Figure 6. Agricultural industry is active in educational programs. (In this photograph a field man is shown examining a snap bean crop prior to harvesting. The purpose is for the farmer to be properly instructed in how to produce the best possible crop.) (Courtesy MFC Services, Jackson, Mississippi)

subscriptions, such as the **Progressive Farmer** and **Farm Journal**. These do not usually promote any specific product, and they attempt to serve a broad spectrum of agriculture. Some of the most important regional and national agricultural magazines are listed in the Appendix.



APPENDIX

Listing of

Important Regional and National Agricultural

Magazines

Important Regional and National Agricultural Magazines (Adapted from Trade Journals and Magazines for Agriculturally Related Occupations by Martin B. McMillion and Published by the Agricultural Education Program, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, 1973.)

Magazine Title	Publisher	Subscription Fee
Ag Chem and Commercial Fertilizer	Ag Chem Publications 200 Commerce Road Cedar Grove, NJ 07009	yes
Agri-Dynamics	Chas. Pfizer & Co. 2501 Wayzata Blvd. Minneapolis, MN 55440	no
Agri-Finance	Franchise Publishing Co. 1920 Waukegan Road Glenview, IL 60025	yes
Agri-Marketing	Agri Business Publications 1920 Waukegan Road Glenview, IL 60025	free to qualified, fee to others
Ageay Cooperator	Box 1333 Syracuse, NY 13201	yes
Agricultural Education	Agricultural Education Mag. Box 3843 Columbus, OH 43214	yes
Agricultural Research	Agricultural Research Service United States Dept. of Agri. Washington, DC 20250	yes
American Cotton Grower	American Cotton Grower Meister Publishing Co. Willoughby, OH 44094	yes
American Farmer (The)	American Farmer Box 628 Lawrence, KA 66044	yes
American Forests	American Forest Assn. 1319 18th St., NW Washington, DC 20036	yes

American Fruit Grower (The)	The American Fruit Grower Willoughby, OH 44094	yes
American Nurseryman	American Nurseryman Pub. Co. 343 South Dearborn Chicago, IL 60604	yes
American Vegetable Grower	American Vegetable Grower Meister Publishing Co. Willoughby, OH 44094	yes
Bee Culture	Bee Culture 623 West Liberty St. Medina, OH 44256	yes
Beef	The Webb Publishing Co. 211 East 43rd St. New York, NY 10017	yes
Beef Talk	Beef Talk 5350 West 78th Street Minneapolis, MN 55435	free to those who qualify
Better Crops with Plant Food	American Potash Institute 1102 - 16th Street, NW Washington, D.C. 20036	yes
Big Farmer	Big Farmer 131 Lincoln Highway Frankfort, IL 60423	free by application, fee for non-qualified
Broiler Industry	Garden State Pub. Co. Garden State Building 4411 Landis Avenue Sea Isle City, NJ 08243	yes
Catfish Farmer and World Agriculture News (The)	Catfish Farmers of America 530 Tower Building Little Rock, AR 72201	yes
Cattleman (The)	The Cattleman 410 E. Weatherford St. Fort Worth, TX 76102	yes
Chemical Farming	Mississippi Chem. Corp. P.O. Box 388 Yazoo, MS 39194	Free

Conservation News	National Wildlife Federation 1412 - 16th St., NW Washington, D.C. 20036	free
Conservationist (The)	New York State Cons. Dept. Albany, NY 12201	yes
Cooperative Shipper	Central Livestock Assoc. Inc. 500 Livestock Exchange Bldg. So. St. Paul, MN 55075	yes
Crops and Soils	American Society of Agronomy 677 S. Segoe Road Madison, WI 53711	yes
Dairy Herd Management	Dairy Herd Management P.O. Box 67 Minneapolis, MN 55445	yes
Dairyman Digest	AMPI Box 455 New Ulm, MN 56073	yes
Defenders of Wildlife News	Defenders of Wildlife 2000 N. Street, NW Washington, D.C. 20036	yes
Down to Earth	2030 Dow Center Dow Chemical Co. Midland, MI 48640	free
Egg Industry	Garden State Pub. Co. 4411 Landis Ave. Sea Isle City, NJ 08243	yes
Farm Chemicals	Farm Chemicals Meister Publishing Co. 37841 Euclid Ave. Willoughby, OH 44094	yes
Farm Journal	Farm Journal Inc. 230 West Washington Square Philadelphia, PA 19105	yes
Farm & Power Equipment	NRFEA Publications, Inc. 2340 Hampton Avenue St. Louis, MO 63139	yes

Farm Quarterly (The)	Land Media, Inc. 222 East Central Parkway Cincinnati, OH 45202	yes
Farmland News	Farmland News P.O. Box 7305 Kansas City, MO 64116	yes
Farm Safety Review	National Safety Council 425 N. Michigan Chicago, IL 60611 Attn: Farm Department	yes
Farm Store Merchandising	The Miller Publishing Co. P.O. Box 67 Minneapolis, MN 55440	free to qualified, fee for others
Farm Supplier	Farm Supplier Watt Publishing Co.. Mt. Morris, IL 61054	yes
Feedlot Management	Miller Publishing Company 2501 Wayzata Blvd. Minneapolis, MN 55440	free to qualified, fee for others
Feed Management	Garden State Publishing Co. Garden State Bldg. Sea Isle City, NJ 08243	yes
Farm Profit	Suite A 3612 S.W. Ninth Des Moines, IA 50315	yes
Farm Technology and Agri-fieldman	Meister Publishing Co. 37841 Euclid Avenue Willoughby, OH 44094	yes
Feedstuffs	Miller Publishing Co. 2501 Wayzata Blvd. Minneapolis, MN 55440	yes
Florists Review	Florists Publishing Co. 343 Dearborn Street Chicago, IL 60604	yes
Flower and Garden	Mid-America Publishing Corp. 543 Westport Road Kansas City, MO 64111	yes

Flower News	Central Flower News, Inc. 549 West Randolph Street Chicago, Il 60606	yes
Furrow (The)	John Deere 1400 Third Avenue Moline, IL 61265	free
Grain and Feed Journal	2142 Board of Trade Bldg. 141 West Jackson Blvd. Chicago, IL 60604	yes
Grounds Maintenance	P.O. Box 2703 Clinton, IA 52732	free to qualified, fee for others
Grower's Talk	Geo. Ball West Chicago, IL 60185	yes
Hoard's Dairyman	W.D. Hoard & Son Fort Atkinson, WI 53538	yes
Hog Farm Management	Miller Publishing Co. P.O. Box 67 Minneapolis, MN 55440	yes
Home & Garden Supply Merchandiser	P.O. Box 1291 Reader Service Dept. Minneapolis, MN 55440	free to qualified, fee for others
Horticulture	Massachusetts Hort. Soc. Horticulture Hall 300 Massachusetts Ave. Boston, MA 02115	yes
Implement and Tractor	Intertec Publishing Corp. 1014 Wyandotte Street Kansas City, MO 63155	yes
I.H. Farm	International Harvester 401 N. Michigan Avenue Chicago, IL 60611	free
International Wildlife	National Wildlife Federation 1412 16 th St., NW Washington, D.C. 20036	yes
Izaak Walton News	Izaak Walton League of America 4849 Gulf Road Skokie, IL 60076	yes

Journal of Dairy Science	American Dairy Science Assn. 113 N. Neil Street Champaign, IL 61801	yes
Journal of Soil & Water Conservation	7515 N.E. Ankeny Road Ankeny, IA 50021	yes
Landscape Industry	Landscape Industry 850 Elm Grove Road Elm Grove, WI 53122	yes
Lawn and Garden Outdoor Living	Intertec Publishing Corp. 1014 Wyandotte Street Kansas City, MO 64105	free to qualified, fee for others
National Hog Farmer	Webb Publishing Co. 1999 Shepard Road St. Paul, MN 55116	yes
National Wildlife	National Wildlife Federation 1412 16th St., NW Washington, D.C. 20036	yes
National Livestock Producer	155 N. Wacker Drive Chicago, IL 60606	yes
Nation's Agriculture	1000 Merchandise Mart Plaza Chicago, IL 60654	yes
New Agriculture (The)	Miller Publishing Company 2501 Wayzata Blvd. Minneapolis, MN 55440	free to qualified, fee for others
New Holland News	New Holland Division of Sperry Rand New Holland, PA 17557	free
Nursery Business	Nursery Business 850 Elm Grove Road Elm Grove, WI 53122	yes
Organic Gardening & Farming	Rodale Press, Inc. 33 East Minor Street Emmaus, PA 18049	yes
Park Maintenance	Madison Publishing Division P.O. Box 409 Appleton, WI 54911	yes

Parks and Recreation	National Rec. & Parks Assn. 1601 N. Kent Street Arlington, VA 22209	yes
Progress thru Research	General Mills 9200 Wayzata Blvd. Minneapolis, MN 55440	free
Peanut Journal and Nut World	P.O. Drawer 347 Suffolk, VA 23434	yes
Petfood Industry	Garden State Pub. Co. Garden State Bldg. Sea Isle City, NJ 08243	yes
Poultry Digest	Garden State Pub. Co. 4411 Landis Avenue Sea Isle City, NJ 08243	yes
Poultry Meat	Poultry Meat Watt Publishing Co. Mount Morris, IL 61054	yes
Poultry Tribune	Watt Publishing Co. Mount Morris, IL 61054	yes
Practicing Nutritionist	2030 Dow Center Dow Chemical Co. Midland, MI 48640	yes
Progressive Farmer	821 North 19th Street Birmingham, AL 35202	yes
Soil Conservation	Superintendent of Documents Government Printing Office Washington, D.C. 20402	yes
Soybean Digest	American Soybean Assn. Hudson, IA 50643	yes
The Farmer	Webb Publishing Co. 1999 Shepard Road St. Paul, MN 55116	yes
Top Op	Farm Journal, Inc. 230 West Washington Square Philadelphia, PA 19105	yes

Turfgrass Times	Turf-Grass Publications P.O. Box 51088 North Jackson Beach, FL 32250	yes
Turkey World	Watt Publishing Co. Mount Morris, IL 61054	yes
Veterinary Medicine/ Small Animal Clinician	Veterinary Medicine Pub. Co. 144 North Nettleton Bonner Springs, KA 66012	yes
Virginia Carolina	Herald Printing House P.O. Box 427 Ahoskie, NC 27910	yes
Weeds Today	RR 3, Box 147 Arcola, IL 61910	yes
Weeds, Trees and Turf	Harvest Publishing Company 9800 Detroit Avenue Cleveland, OH 44102	free
World Farming	Intertec Publishing 1014 Wyandotte Street Kansas City, MO 64105	yes

Selected Bibliography
and
Sources of Additional Information

Annual Report of the State Department of Agriculture and Commerce. Jackson: Mississippi Department of Agriculture and Commerce, 1971.

Background on U. S. Agriculture, Leaflet No. 491. Washington: U.S. Department of Agriculture, 1972.

Blake, Edward L. **Farm Bureau in Mississippi.** Jackson: Mississippi Farm Bureau Federation, 1971.

Davis, John H. and Goldberg, Ray H. **A Concept of Agribusiness.** Boston: Harvard University, 1957.

Guither, Harold D. **Heritage of Plenty.** Danville, Illinois: The Interstate Printers and Publishers, Inc., 1972.

Krebs, Alfred H. **Agriculture in Our Lives.** Danville, Illinois: The Interstate Printers and Publishers, Inc., 1973.

Lee, Jasper S. **Career Education: Agribusiness and Natural Resources Occupational Cluster.** Columbus: Clearinghouse on Vocational and Technical Education, Ohio State University, 1973.

Lee, Jasper S. **A Reference Unit on the Meaning and Importance of Agribusiness.** Mississippi State: Research and Curriculum Unit, 1974.

McCormick, Cyrus. **The Century of the Reaper.** Boston: Houghton Mifflin Company, 1931.

Polopolus, Leo and Johnson, Jack D. **Exploring Agribusiness,** D.A.E. Circular No. 284. Baton Rouge: Louisiana State University, Department of Agricultural Economics, 1961.

Roy, Ewell Paul. **Exploring Agribusiness.** Danville, Illinois: The Interstate Printers and Publishers, Inc., 1967.

Sturgis, Alice. **Your Farm Bureau.** New York: McGraw-Hill Book Company, Inc., 1958.

Weyant, J. Thomas; Hoover, Norman K.; and McClay, David R. **An Introduction to Agricultural Business and Industry.** Danville, Illinois: The Interstate Printers and Publishers, Inc., 1966.

Wills, Walter J. **An Introduction to Agri-Business Management.** Danville, Illinois: The Interstate Printers and Publishers, Inc., 1973.

Wilson, Leonard L., ed. **Farm and Power Equipment Retailer's Handbook.** St. Louis: National Farm and Power Equipment Dealer's Association, 1964.

Your United States Department of Agriculture. Washington: U.S. Department of Agriculture, Office of Information, March, 1973.

CE-807 7/0